Quickie F-40 VR

Owner's Manual

SUNRISE MEDICAL®

How to use this manual

We at Sunrise Medical want you to get the best out of your Quickie F40 powerchair. This Owner's Manual will familiarise you with the chair and its features. It contains hints on everyday usage and general care in addition to information on the high quality standards which we adhere to and details about the guarantee. There are a wide range of accessories and adjustments available on the Quickie F40. For further information about these you should contact your wheelchair perscriber/supplier. Your wheelchair will reach you in excellent condition having been personally inspected before leaving our factory. By following the guidelines for maintenance and cleaning your wheelchair will maintain its first class condition and give you complete satisfaction.

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Introduction

The Quickie F40 has been designed for use by an individual on a daily basis. It is suitable for both indoor and outdoor use. It is only intended for use as a pavement vehicle, but may also be used when crossing between pavements.

This vehicle has been designed for a single occupant of limited mobility up to the weight of 118Kg who has the cognitive, physical and visual ability to control the vehicle safely. If you are in any doubt as to the suitability of the powerchair, contact your local Sunrise approved dealer for clarification, prior to commencing use.

It is very important to read the relevant section of the owners manual when making any adjustments. If you have any queries about the use, maintenance or safety of your wheelchair please contact your local approved Sunrise Medical service agent. If you do not know of an approved dealer in your area or have any other questions please write or telephone:

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Sunrise Medical is ISO 9001 certified, which ensures quality at all stages of the development and production of this wheelchair.

This product is manufactured to comply with the radio interference requirements of EEC directive 89/336/EEC and Medical Device Directive 93/42/EEC CE

Sunrise is dedicated to providing products of exacting quality which conform fully and reliably to the requirements of their intended use. Sunrise is accredited to B. S. EN ISO 9001 which is the internationally recognized standard for quality management systems. This approval ensures we provide quality in all areas of our business from development through to final delivery.

Serial Number: **Inspected by:**

Guarantee

Your guarantee

The guarantee form is encluded in the Sunrise Pack. Please fill in the relevant details and return to us to register your entitlement.

THIS IN NO WAY AFFECTS YOUR STATUTORY RIGHTS.

Warranty conditions

1 The repair or replacement will be carried out by an authorised Sunrise Medical dealer/service agent.

2 To apply the warranty conditions should your Wheelchair require attention under these arrangements, notify the designated Sunrise Medical service agent immediately giving full information about the nature of the difficulty. Should you be operating the Wheelchair away from the locality of the designated Sunrise Medical service agent, work under the “Warranty Conditions” will be carried out by any other service agent designated by the manufacturer.

3 Should any part of the Wheelchair require repair or replacement as a result of a specific manufacturing or material defect within twelve months from the date on which the possession of the Wheelchair was transferred to the original purchaser, and subject to it remaining within that ownership, the part or parts will be repaired or replaced completely free of charge if returned to the authorised service agent.

Note: This guarantee is not transferable.

4 Any repaired or replaced part will benefit from these arrangements for the balance of the warranty period applicable to the Wheelchair.

5 Parts replaced after the original warranty has expired are covered for a further twelve months.

6 Items of a consumable nature will not generally be covered during the normal warranty period unless such items have clearly suffered undue wear as a direct result of an original manufacturing defect. These items include amongst others upholstery, tyres, inner tubes and similar parts.

7 The above warranty conditions apply to all wheelchair parts, for models purchased at full retail price.

8 Under normal circumstances, no responsibility will be accepted where the Wheelchair has required repair or replacement as a direct result of:-

a) The Wheelchair or part not having been maintained in accordance with the manufacturer’s recommendations, where such exist, or failing to use only the specified original equipment parts.

b) The Wheelchair or part having been damaged by neglect, accident or improper use.

c) The Wheelchair or part having been altered from the manufacturer’s specifications, or repairs having been attempted prior to the service agent being notified.

Please keep a note of your local service agent’s address and telephone number in the space below. In the event of a breakdown, contact them and try to give all relevant details so they can help you quickly.

The Wheelchairs shown and described in this manual may not be exactly the same in every detail as your own model. However, all instructions are still entirely relevant, irrespective of detail differences.

The manufacturer reserves the right to alter without notice any weights, measurements or other technical data shown in this manual. All figures, measurements and capacities shown in this manual are approximate and do not constitute specifications.

Sunrise Medical authorised Service Agent Name: Address: Postcode:

Sunrise Medical authorised Service Agent Name: Address: Postcode:

Sunrise Medical Limited
High Street Wollaston West Midlands DY8 4PS
England
Tel 01384 4466 88 Fax 01384 44 66 99
www.sunrisemedical.co.uk

Please remember to fill in and post the guarantee registration card enclosed with this manual. **Sunrise Medical Limited** recommend that you do not undertake maintenance tasks other than those explained in this manual. Your local approved Sunrise Medical service agent is fully trained by Sunrise Medical to carry out detailed maintenance as and when required. **Use only genuine Sunrise Medical replacement parts.**

Features and options

The Quickie F40 has been designed for use by an individual on a daily basis. It is suitable for both indoor and outdoor use. It is only intended for use as a pavement vehicle, but may also be used when crossing between pavements.

This Quickie F40 has been designed for a single occupant of limited mobility up to the weight of 118kg who has the cognitive, physical and visual ability to control the vehicle safely. If you are in any doubt as to the suitability of the powerchair, contact your local Sunrise approved dealer for clarification, prior to commencing use.

Some of the options shown in this manual may not be available in your country. For further information please consult your Sunrise supplier.

Safety warning and user tips

Safety warnings

Safety is very important with any vehicle that is power driven. Here are some helpful tips to safeguard your use.

General

Always ensure that your wheelchair is switched off before attempting to mount or dismount.

Always ensure that you are able to operate all controls from a comfortable position. Paying attention to your posture is essential to ensure your continued comfort and well being.

Always make sure that you can be seen clearly, especially if you intend using your wheelchair in poor light.

Kerbs

Never descend a kerb forwards. Please read carefully the section on kerb climbing in this manual before attempting to mount and dismount any kerbs in your wheelchair.

Do not attempt to climb or dismount a series of steps. It is unsafe to do so and could cause personal injury or damage the chair. The F40 has only been designed to climb a single step or kerb.

Routine service

Like most things in life a little care and attention goes a long way and your chair is no exception. The recommended service interval is one year.
(See service history on later page).

Emergency freewheel

Please remember that you have no braking facility when the freewheel lever is moved from the normal drive position to the freewheel position.

The wheelchair must never be left with the lever in the freewheel position. For a fuller description of this facility and its limitations to use please see later section.

Emergency braking

The simplest and safest way to stop the wheelchair is to release the joystick control lever (see Control pod section). This will bring the chair to a halt in a controlled manner.

Switching the control system off whilst the chair is in motion will also bring the chair to a halt. This latter method is not recommended as the stopping action is very abrupt.

Sharp turns

Full speed turns should not be attempted. If you need to turn sharply you must reduce your speed with the joystick or speed setting. This is particularly important when travelling across or down a slope. Disregarding this advice could lead to your wheelchair tipping over.

Safety warning and user tips

Batteries

Your wheelchair is supplied as standard from Sunrise Medical with maintenance free batteries. These only require regular charging.

Do not, under any circumstances, tamper with the batteries. If in any doubt contact your local service agent.

Do not connect the battery charger to the mains supply until after you have connected the charger to the wheelchair. Before charging, please read the relevant section in this manual. Take care with battery acid which is very dangerous. It can cause burns to the skin as well as damage to floors, furniture and your wheelchair. If it comes into contact with the skin or clothing, wash immediately with soap and water. If it comes into contact with the eye, immediately flood the eye with running cold water for at least 10 minutes and seek medical attention immediately. Acid can be neutralised with baking soda and water. Take care to keep batteries upright at all times, especially when transporting your wheelchair.

Note: Before using your vehicle for the very first time, please charge the batteries for a period of 24 hours.

Tyres

Your wheelchair tyres can wear depending on use. Check them regularly in accordance with the service instructions in this manual, especially the pressure of the tyres.

NEVER inflate the tyres using a garage forecourt airline. Always use the pump provided.

Cleaning seating

This is important should the wheelchair be used by more than one person to ensure there is no cross infection.

Cleaning controls

Should the control of your wheelchair become soiled or dirty, it can be wiped with a damp cloth with a dilute disinfectant until clean. This is important should the wheelchair be used by more than one person to ensure there is no cross infection.

Wheelchair motors

After prolonged use, the motors will produce heat which is radiated through the motor's outer casing. Do not touch the motor's outer casing for at least 30 minutes after using the wheelchair, to allow it to cool.

Safety warnings

Wheelchair range

The range of your wheelchair can be affected by many factors such as user weight, terrain, ambient temperature and battery condition. The stated range in the sales literature should be seen as the theoretical maximum and may not be attained by every user.

We recommend that every user initially limit their journey to half the stated range, until they have confidence in the actual range their wheelchair can attain. If your battery indicator is showing a low charge then do not attempt a long journey unless you are confident in reaching your destination and also returning to your home without the risk of being left stranded.

Use on a slope

Your wheelchair has been designed and tested to allow its use on slopes or gradients of up to 1 in 4 (25%). However, if you have the option of adjusting the angle of seating with either tilt seat or recline back, then in certain circumstances your wheelchair could become unstable. Before attempting to climb or descend a slope, we strongly recommend that you return the seat and back to an upright position.

Use on a slope (continued)

Failure to do this may cause the wheelchair to become unstable. If you are in any doubt about the capabilities of wheelchair on a slope then do not attempt to drive up or down the slope, try to find an alternative route.

Mobile telephones and two - way radios.

When operating cordless or mobile telephones, two way radios, walkie-talkies, C.B. Amateur Radio or other transmitting devices, the following must be noted:

Mobile telephones or two - way radio devices must not be used while operating the vehicle.

Use of mobile phones or two way radios can cause excessively strong electromagnetic fields. This may interfere with the vehicle’s electronic systems. If mobile phones or two way radios are required to be used, the vehicle must be brought to a halt and the power turned off before any such device is switched on or used.

Preparing your wheelchair for use

Armrests / skirt guard

To fit the armrest/skirt guard assembly, ensure that locking pin A is in the ‘unlocked’ position shown (Fig. 1). Lower the armrest into the support cups and press down to ensure a firm location. Release the locking pin lever to lock position. To adjust the height of the armrest, pull back the lever of locking pin B and hold. Lift or lower armrest to the required position and release pin to lock position. Check armrest has seated properly.

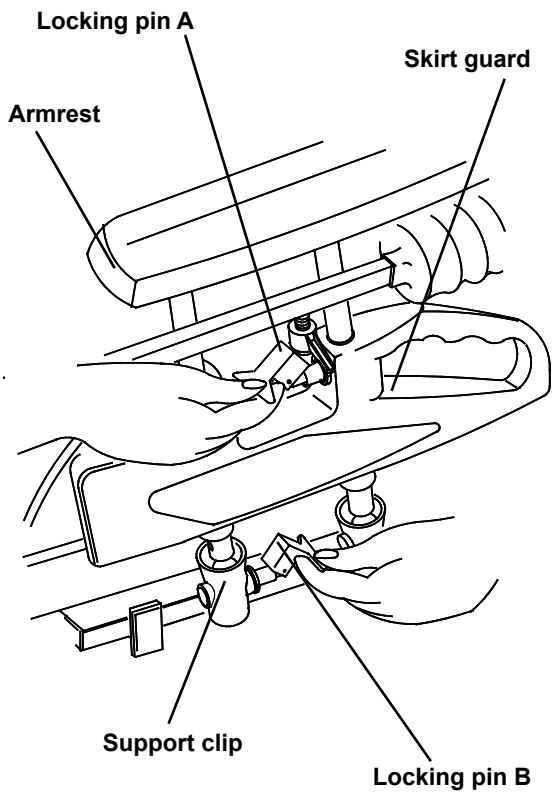


Fig. 1

Control pod

To connect power to the remote control pod, take the cable/plug from the pod and insert the plug into the socket in the programme control box located on the side supporting the remote control pod (Fig. 2).

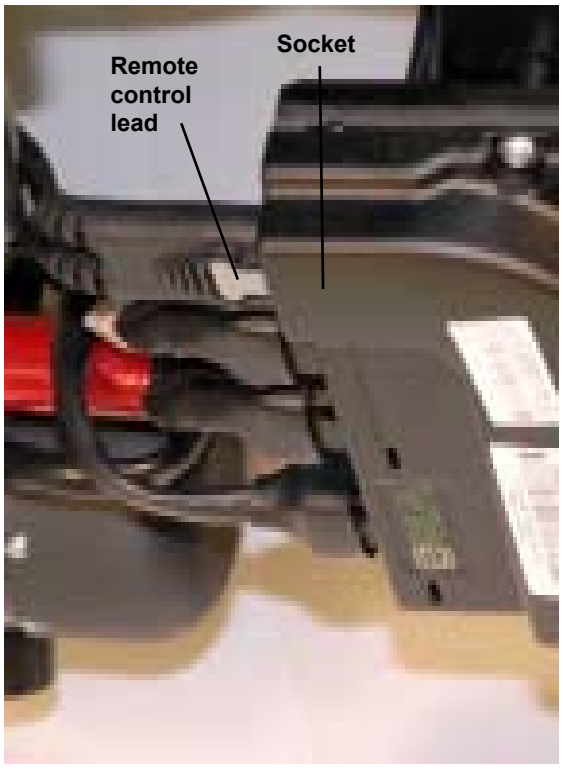


Fig. 2

Preparing your wheelchair for use

Control pod adjustment

The control pod is mounted on a sliding arm that can be adjusted to alter the position of the pod.

For adjustment, loosen the lowest stud using a 4.0 mm Allen key, slide the arm to the required position and tighten the stud, (Fig. 3).

If a 90 degree or parallel swing away is fitted, the control pod may be moved for desk access by pushing it to one side, (Fig. 4).

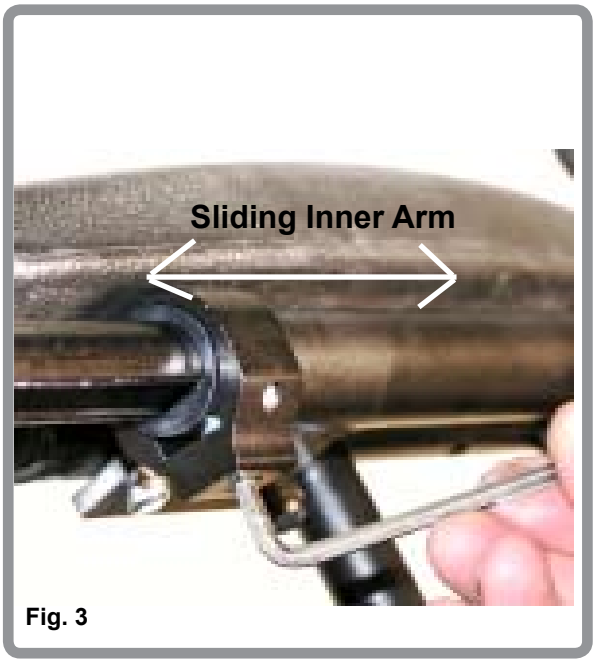


Fig. 3

Fig. 4

Preparing your wheelchair for use

Fitting hanger/footrests -infinitely adjustable hanger/ footrest

Offer the footrest/hanger assembly to the chair as shown (Fig. 5). Position the locating tube into the frame receiver and swing the hanger forward “A” to lock.
To swing away the footrest, push the retaining catch on the hanger whilst turning the footrest outward. Lift to remove.
The footrest can be adjusted for height. To adjust, slacken using the socket key, the set screw in the adjustment collar and set extension tube to the required height.
Re-tighten the screw to secure position.

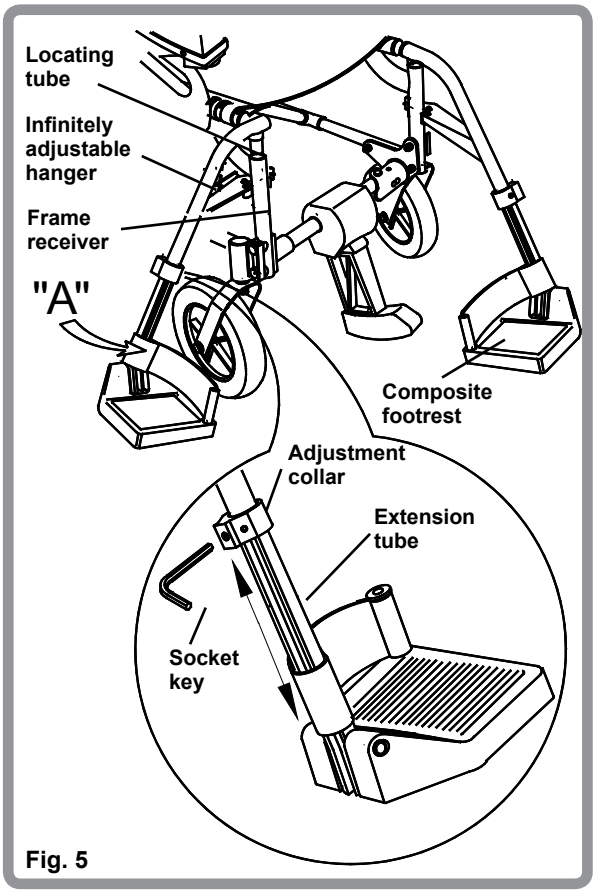


Fig. 5

Footplate angle adjustment 90° hangers (optional)

To adjust the angle of the footplate (Fig. 6) loosen the two retaining screws (1) sufficiently to allow the footplate (2) to rotate (use a 4mm Allen key). Rotate the footplate to the desired angle and tighten the screws to 8-19Nm torque.

Forwards/backwards adjustment (optional)

The footplate can also be moved forwards by removing the screws (1), moving the footplate forwards and aligning the two rear holes in the footplate (2) with the holes in the receiver (3). Replace the screws and tighten as above.

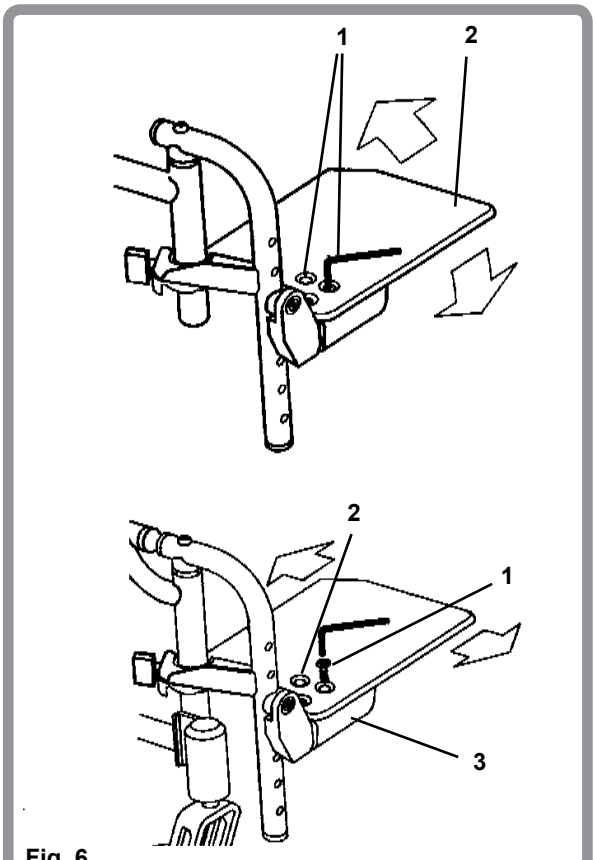


Fig. 6

Preparing your wheelchair for use

Detachable backrest

To remove backrest release both pins (one each side) they must be withdrawn from the side frames. Depressing the retaining button situated in the end of the pins releases the spring loaded pegs allowing the withdrawal of the release pins (Fig. 7). Pull the backrest posts up and out of the seat frame. To re-fit, reverse the above procedure ensuring that the backrest post holes align with the hole in the seat frame. Re-insert pin from the outside of frame inwards and ensure that the spring loaded pegs lock out on clearing the upright post.

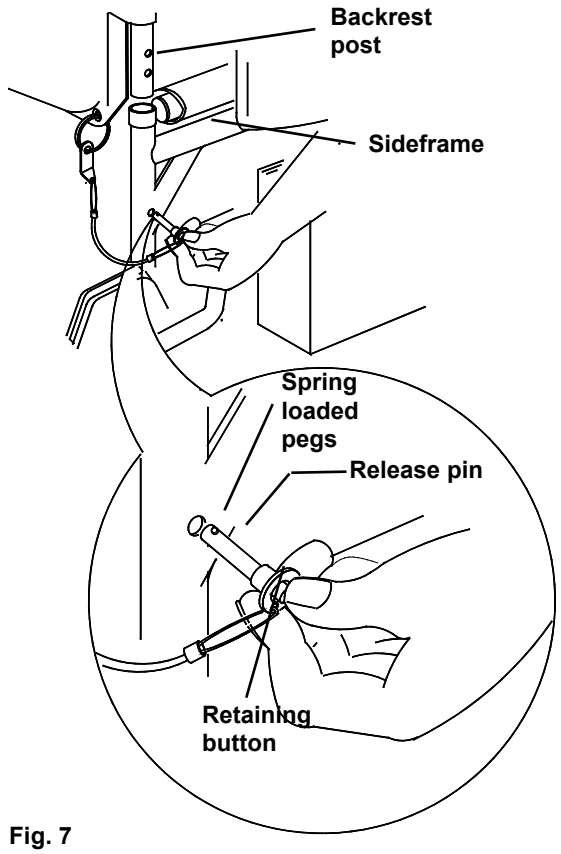


Fig. 7

Angle adjustable backrest

If your powerchair has been fitted with the optional adjustable angle backrest (Fig. 8), it can be folded down. Remove the release pins from both sides and fold the backrest down onto the seat.
To adjust the angle, replace the pins and slacken angle locking screws on both sides of the wheelchair. Now select the position or angle you require, ensure that serrations are effectively seated in their position and tighten all screws securely. Test backrest to confirm rigidity.

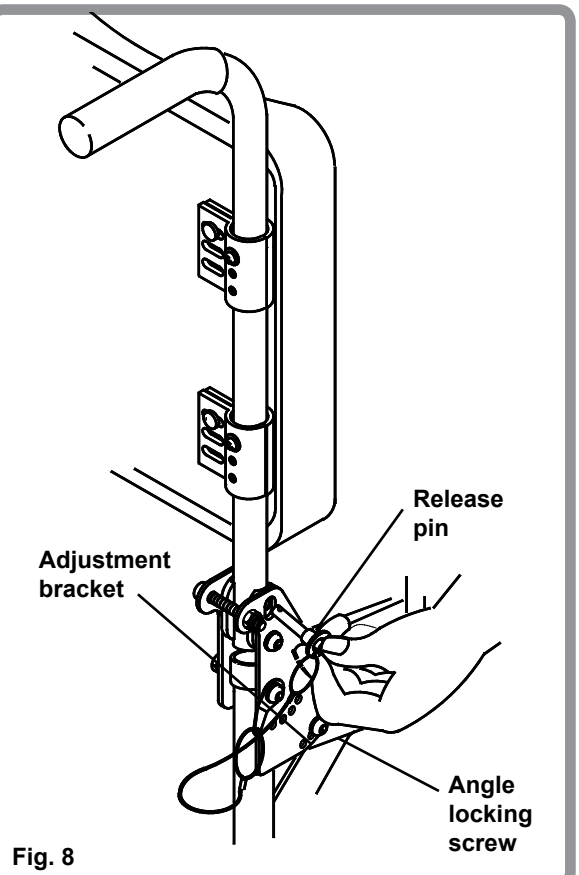


Fig. 8

Seat sling tension adjustment

The seat upholstery may be re-tensioned. To do this, loosen all the screws as shown in Fig. 9 and detach the Velcro©. Re-tension the seat sling by pulling down on the detatched Velcro© against the clamping bar. Re-secure the clamping screws and re-seal Velcro©. Check sling for tension.

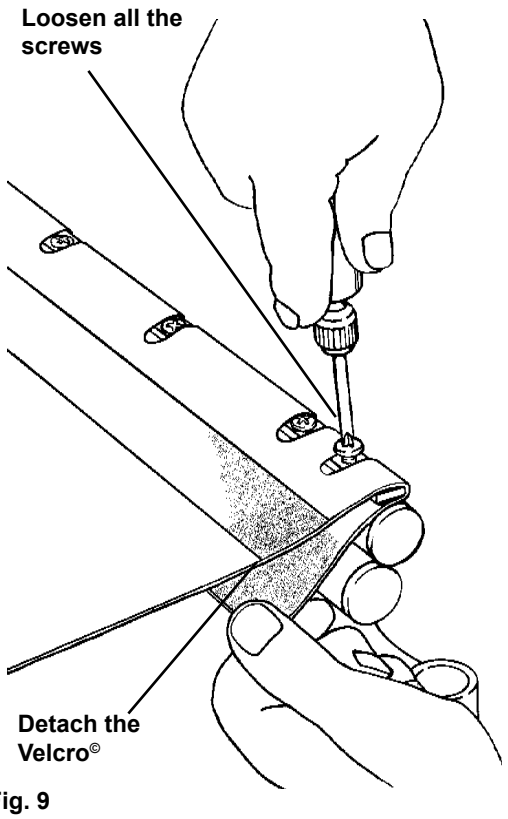


Fig. 9

Seat cushions

Seat cushions supplied by Sunrise Medical will have Velcro© strips that correspond to patches on the seat sling (Fig. 10). You must ensure these are aligned prior to using the wheelchair. Other cushions used should also have Velcro© strips in a similar position to ensure the cushion does not slip off the seat. The seat cushions supplied by Sunrise Medical all have removable covers.

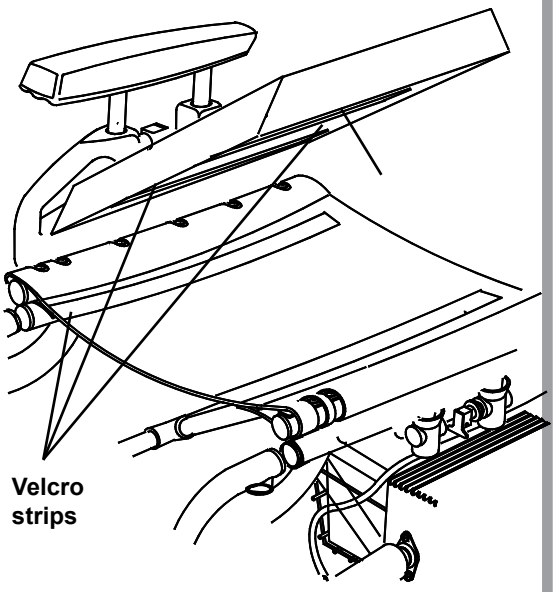


Fig. 10

Adjustment of optima backrest (where fitted)

To change the shape and/or tension of the 'Optima' backrest, remove the padded cover from the rear of the backrest and expose the tension straps (Fig. 11). Loosen or tighten the straps to suit. (The most comfortable and supportive position is achieved with the wheelchair user seated in the chair). Ensure the straps are securely fastened and replace the padded cover prior to use.

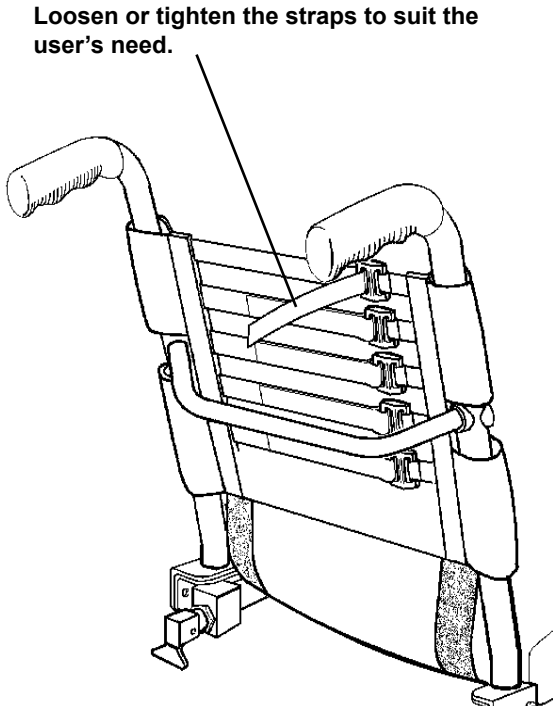


Fig. 11

Safety cut-outs

To safeguard the electrical systems there are safety cutouts built into your wheelchair. The control battery box (Fig.12) cutouts are located to the rear of the battery box along side the electrical power socket. The 15 amp controls the charging circuit and the 70 amp the battery power circuit. In the event of an electrical fault the cutout button will extend out isolating the circuit. Depress button after a short period to resume. Protection for your motors is integrated within the programme control box and will decrease the power automatically. This operates in extreme conditions, repetitive steep hill climbing in high ambient temperatures. Contact your Sunrise Medical dealer if faults re-occur.

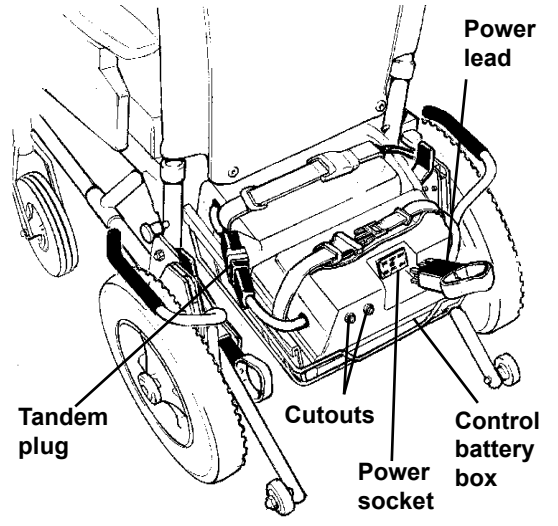


Fig. 12

Emergency freewheel

This is a mechanism which enables the drive to be disconnected in the event of battery or other failure. Turn drive levers away from the wheels, to disengage the drive from the motors. Use only in an emergency, or if your wheelchair needs to be moved manually.
To engage drive rotate the levers on the rear of the gearboxes towards drive wheels. Engage drive before parking your powerchair (Fig.13).

It is not intended for permanent use.

REMEMBER:

The chairs automatic braking system will not work unless the handles on both gearboxes are engaged.

ALWAYS RE-ENGAGE THE EMERGENCY FREEWHEELS AFTER USE

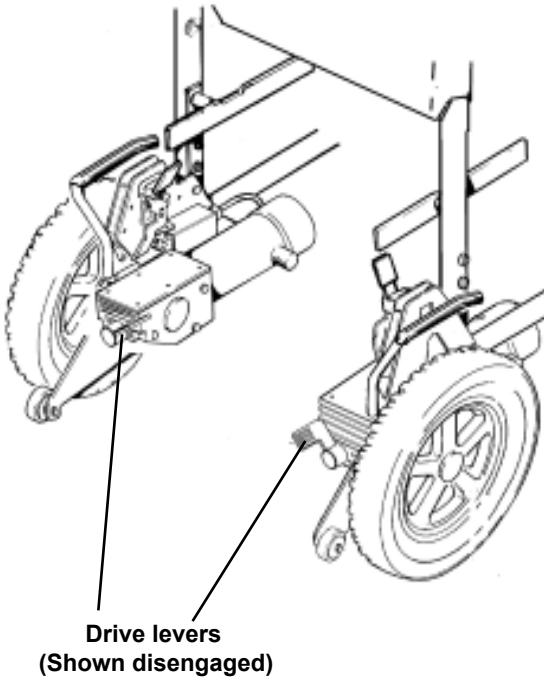


Fig. 13

Operating the control joystick

When engaging the main on/off switch, allow a few seconds prior to moving the joystick. This allows the system to self check and for the battery level indicator to display the charge state of the battery.If you move the joystick too soon, the battery level indicator will scroll, disabling drive to your wheelchair. Whilst this is not harmful to your wheelchair, you will need to switch off and then back on to clear the system (Fig. 14).

If this is your first encounter in driving a power chair then select the lowest speed setting. Move the joystick gradually in the direction you wish to go. Proceed slowly until you become of aware of the small movements required of the joystick. **Do not** push the joystick too quickly forward. Anticipation of the direction of travel is soon acquired and correction is then made instinctively in the same way that a car driver always turns the steering wheel in the direction he wants to go, even though the car and wheel may want to go another way. Look ahead when you are driving, and not at the control pod but do remember that only practice will enable you to become proficient. Brakes will operate as soon as the joystick is released and allowed to return to its centre position. On level ground, this should bring you to a halt within one chair's length.

Fig. 14

On a steep hill, it may travel slightly further and you will notice the brakes being automatically applied when the chair is nearly stationary. Once the brakes have been applied, switching off will make no difference to the brakes, although it is always safer when remaining stationary for a period of time to switch off. If you need to do an emergency stop, then switch off the on/off switch. This will immediately apply full braking and bring the chair to a rapid halt.

This should only be done when travelling in the forward direction and never when travelling in reverse as the severe braking effect could be hazardous.

Kerb climber

Your wheelchair is normally capable of climbing small steps and kerbs. With the Kerb Climbing service, you will be able to climb any kerb up to 4” (10cms) high. Please follow the safety instructions carefully.

Fitting and removal

1 Locate the kerb climber bar into the left hand location bracket and push the bar against the spring (Fig. 17).
2 Hold the kerb climber with your right hand over the locking lever and release the locking pin.
3 Align the two pips on the right hand side of the bar with the cut outs on the right hand location bracket.
4 Allow the tension in the spring to locate the kerb climber into the right hand location bracket.
5 Release the locking lever and ensure the locking pin is correctly positioned in the locating hole (Fig. 18).
6 Reverse the procedure to remove the kerb climber.

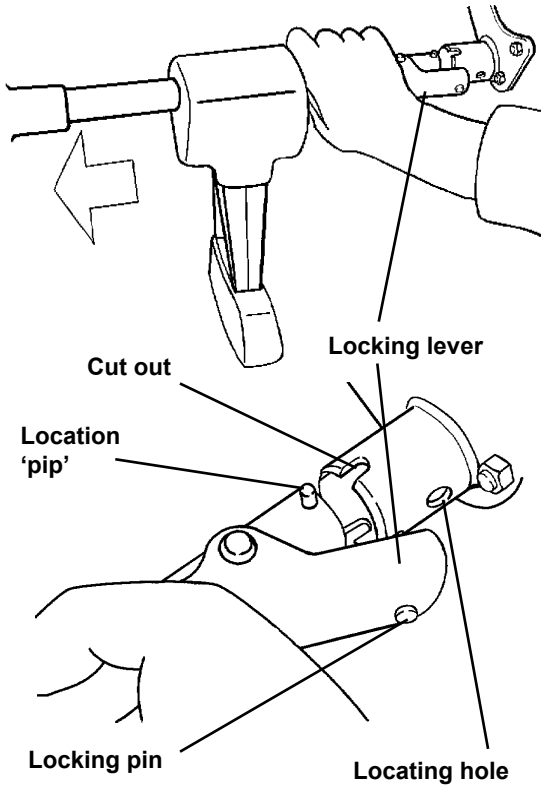


Fig. 17

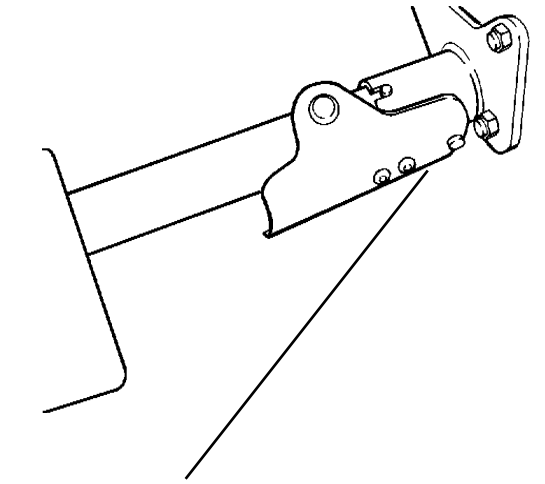


Fig. 18

Front transfers

If you find that the kerb climber is obstructing your exit or entry into the wheelchair you can swing the kerb climber back into the reverse position. Follow the fitting instructions above, but rotate the climber through 90° backwards (Fig. 19). The kerb climber must be returned to its operating position prior to climbing kerbs.

Kerb climber being located into transfer position

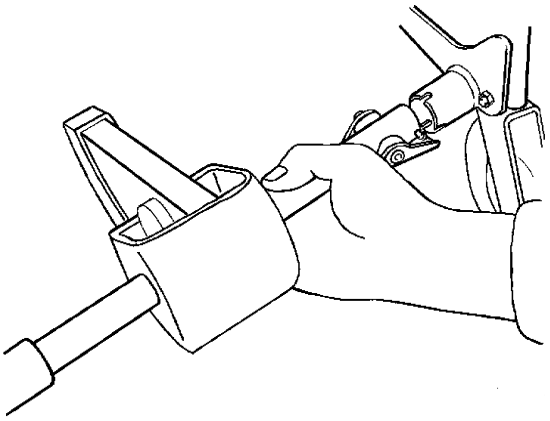


Fig. 19

Mounting the kerb

1 Approach the kerb head on driving forwards slowly and steadily (Fig. 20).
2 As the kerb climber makes contact with the kerb, the wheelchair should be moving slowly. Small kerbs can be climbed from a standstill.
3 Apply sufficient power to the motors to lift the front of the chair up onto the kerb and then apply slightly more power and speed so that the drive wheels climb the kerb smoothly and without hesitation. As far as possible, keep the joystick in the straight forward position.

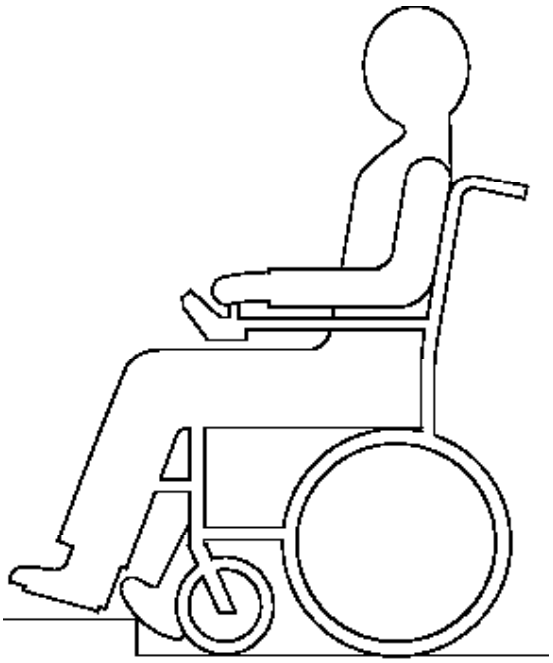


Fig. 20

Using your wheelchair

Dismounting the kerb

1 Reverse the chair slowly and carefully until the rear wheels are on the edge of the kerb (Fig. 21).
2 Reverse as slowly as possible off the kerb with the rear wheels. You will feel more secure if you can lean forward, but if you can't, don't worry,the wheelchair is extremely stable as long as you stay within its limitation.
3 The front of the chair will naturally follow down the kerb as you continue to drive slowly backwards.

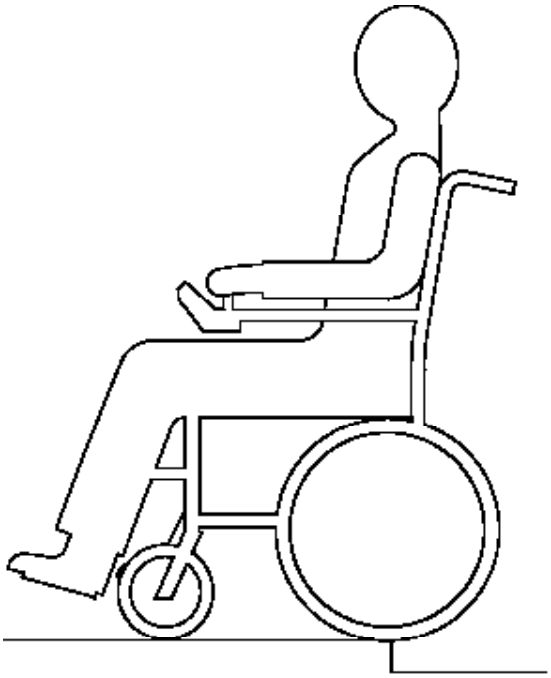
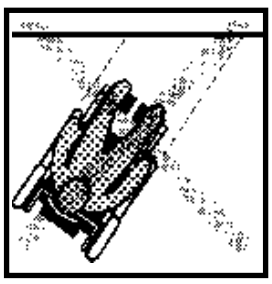
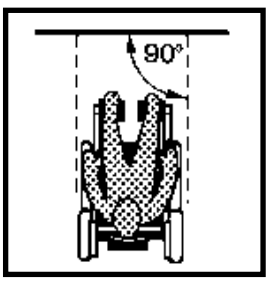


Fig. 21

Caution

1 Please show the utmost consideration for the other traffic on the road. Remember that the last thing a car or lorry driver expects to see is a wheelchair backing off the kerb into the road. If in any doubt, do not risk crossing the road until you are certain that it is safe.
2 **Always** cross the road as quickly as possible.
3 **Do not** attempt to go up or down more than a 4" (10 cm) high kerb.
4 **Do not** attempt to use the kerb climber on a series of steps.
5 **Do not** attempt high kerbs if on steep slopes or cambers.
6 **Do not** attempt any kerbs in the vicinity of drain covers, uneven or gritty road surfaces.
7 **Do not** attempt to dismount a kerb any higher than 2" (5 cm) in the forwards direction.
8 **Do not** mount or dismount kerbs at an angle other than straight on (90°) to the edge of the kerb (Fig. 20).
9 **Prior** to climbing ensure your legrests will clear the kerb.





The Penny and Giles Pilot + control pod

Power supply

Ensure the power lead is connected correctly into its socket on the rear of the control pod (Fig. 22).

The immobiliser plug

When this is activated the chair will not function, other than the hazard warning light system. This may be useful if you wish to leave your wheelchair unattended (Fig. 22).

To activate the immobiliser

1. Switch the chair on via the On/Off button (Fig. 23).
2. Insert the immobiliser plug into the charger/programmer socket located on the front of the control pod.
3. Remove the plug after 1-2 seconds.
4. Your chair should now be immobilised.

To de-activate the immobiliser

1. Switch the chair on via the On/Off button.
2. Insert the immobiliser plug into the charger/programmer socket located on the front of the control pod.
3. Remove the plug after 1-2 seconds.
4. Your chair should now be ready to use.

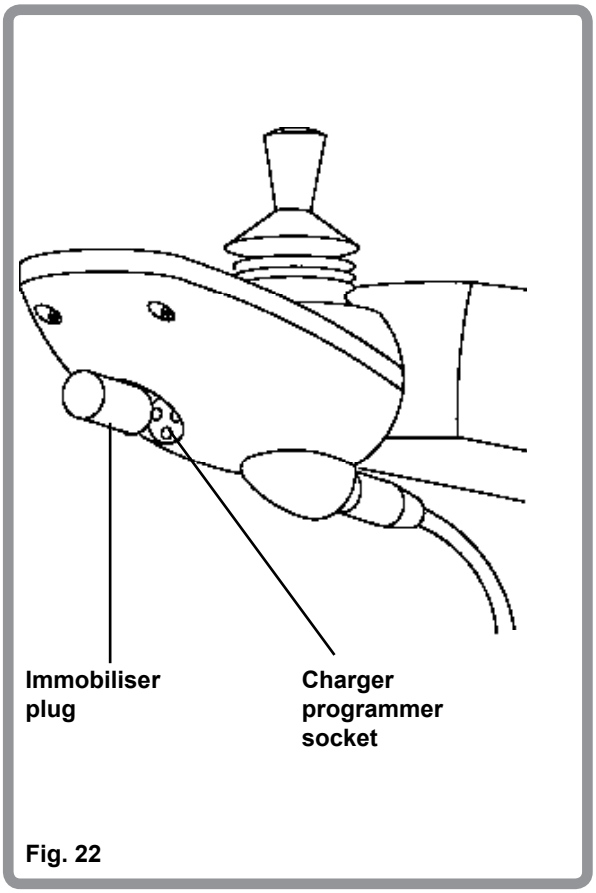


Fig. 22

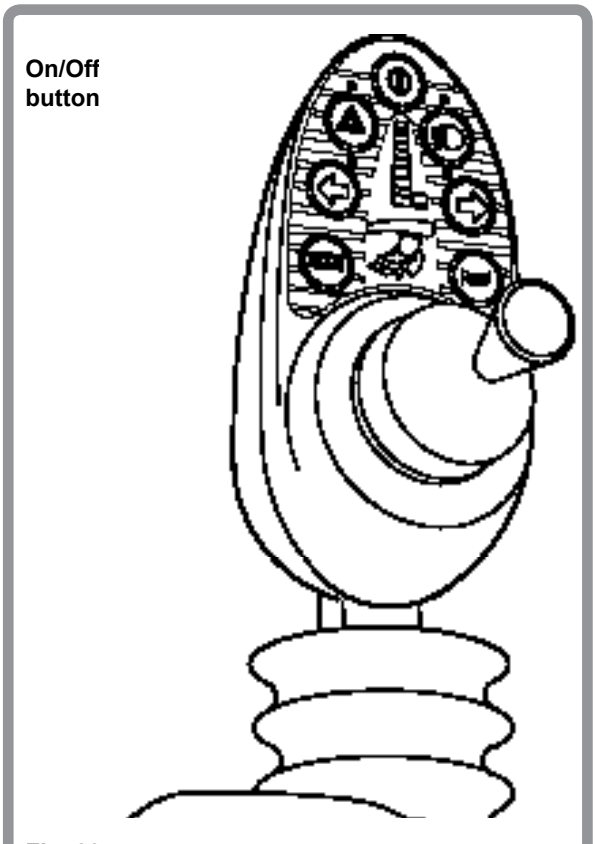


Fig. 23

VR2

Fig. 33

- **On/off button:** This connects or disconnects the entire electronic system, which supplies energy to the motors. Do not use this button to stop the chair except in case of emergency, doing so may damage the wheelchair.

- **Battery Gauge:** This indicates that the wheelchair is under power. It also indicates any fault there may be in functioning. The number of lights flashing indicates the fault type. (See “Battery Gauge” in this manual.)

- **Speed indicator:** This indicates the maximum speed set for the wheelchair. There are five speeds predefined. The first is the lowest, the last is the highest.

- **Speed decrease button:** Decrease the maximum speed setting

- **Speed increase button:** Increase the maximum speed setting

- **Horn switch**

Battery Gauge

- If it remains lit, this means that everything is OK. It flashes to indicate any fault that may have arisen. Slow and stable flashing means the batteries need charging.
- If it flashes once every 2.5 seconds, this means that the control system has deactivated particularly if the wheelchair has not been used for a certain period of time. To reactivate it, turn off the system and then turn it on again.
- If the fault indicator flashes rapidly, this indicates that there is a fault. Turn off the system. Check the state of the batteries and the connections, and turn on the system again. If the flashing continues, the number of bars flashing will indicate the location of the fault.
  - If the number of bars on is 1: The batteries need charging, or are badly connected.
  - If the number of bars on is 2: The left motor is improperly connected.
  - If the number of bars on is 3: Electrical fault in the left motor.
  - If the number of bars on is 4: The right motor is improperly

connected.

- If the number of bars on is 5: Electrical fault in the right motor.
- If the number of bars on is 6: The battery charger is plugged in.
- If the number of bars on is 7: Fault in the control.
- If the number of bars on is 8: Fault in the control system. Make sure the control system connections are secure.
- If the number of bars on is 9: Fault in the electro-magnetic brake.
- If the number of bars on is 10: Excess voltage.
- To operate the lights and indicators press the relevant switch for the on and off operation. To operate the actuators press the actuator button in front of the joystick. A left or right movement of the joystick selects the tilt or back actuator. A LED will indicate the option selected. Moving the joystick forwards and backwards changes the angle of the seat option chosen.

By pressing the actuator button again you return into the drive mode.

Controller Warnings

Ensure that you always have comfortable access to the controls whilst the chair is moving and make sure that the controller is fixed securely to the chair.
It is important that the joystick boot is replaced if it is torn or brittle, failing to do so could cause substance damage to the controller and unexpected movement of the chair.
Do not replace the joystick knob with any unauthorised item. It may cause hazardous operation and loss of control of the chair.
Please ensure that the control system is switched off prior to cleaning.

Cleaning instructions

Should the control of your wheelchair become soiled or dirty, it can be wiped with a damp cloth with a dilute disinfectant until clean. This is important should the wheelchair be used by more than one person to ensure there is no cross infection.
!! Control system to be switched off prior to cleaning!!

Programming port

Hand Control: The programming port is placed in the bottom front of the pod.
No hand control: The programming

port can be any unused bus socket on any of the modules. If no free bus socket is available bus splitters are available through SUNRISE MEDICAL.
This will enable an approved service agent to re-programme your chair and also gain useful information when tracing any faults.
When the chair leaves the factory, the parameters of the controller are set to default.
To programme the controller you need a special programming device (Handheld or PC software), which is available through your Sunrise Medical Dealer.
Note: SUNRISE MEDICAL does not accept responsibility for damages which result from unexpected stopping of the wheelchair or inappropriate programming or unauthorised use of the wheelchair.
Note: Programming the controller of the wheelchair is only allowed through authorised personnel trained by Sunrise Medical. Incorrect controller settings could cause driving outside the safe limits and could result in damage or injury. (Fig. 34)

Fig. 34

Parallel Swing-Away

Before adjusting the swing-away arm, switch off the controller to avoid accidental displacement of the joystick which would cause unwanted movement of your wheelchair.

Gently apply pressure to the side of the controller nearest the user and as close as possible to the front of the controller.

The controller will move outward and then backward before reaching its fully back position.

Keep your fingers and clothing, etc., clear while operating the swing-away mechanism.

If required, your wheelchair can be operated with the swing-away mechanism in its fully back position, but only for slow manoeuvering such as positioning the wheelchair closer to table tops, etc.

To revert to the normal driving position, switch off the power and pull the arm outwards and then forwards before returning the arm to its 'home' position. Make sure the controller is fully engaged in its home position before switching on and operating the wheelchair in the normal manner.

Caution

Do not hang any items on or over the parallel swing-away remote assembly as this could damage the swing-away mechanism.

When transferring to and from the wheelchair do not use the remote as a means of support.

Warning

Keep fingers, clothing, etc., clear of the swing-away mechanism at all times.

Ensure the power is switched off while adjusting the parallel swing-away arm.

Only operate the wheelchair at low manoeuvring speed when the parallel swing-away is in use

Ensure that you set the speed of the attendent control to aspeed that you can comfortably follow.

Ensure that you always have comfortable access to the controls whilst the chair is moving and make sure that the controller is fixed securely to the chair.

It is important that the joystick boot is replaced if it is torn orbrittle, failing to do so could cause substance damage to the controller and unexpected movement of the chair.

Always turn off the power to the controller when leaving the user in the chair.
Do not replace the joystick knob with any unauthorised item. It may cause hazardous operation and loss of control of the chair.

Parallel Swing-Away

Ensure that you always have comfortable access to the controls whilst the chair is moving. Make sure that the controller is fixed securely to the centre bar.
It is important that the joystick boot is replaced if it is torn or brittle, failing to do so could cause substance damage to the controller and unexpected movement of the chair.

Always turn off the power to the controller before moving the controller out of the way.

The maximum weight allowed for the tray is 2.5kg.
Do not to overload the tray, this could cause the tray to break or could cause the chair to become unstable.
Ensure that you always have comfortable access to the controls whilst the chair is moving and make sure that there is nothing on the tray that could interfere with your control of the chair.
It is important that the joystick boot is replaced if it is torn or brittle, failing to do so could cause substance damage to the controller and unexpected movement of the chair. Always turn off the power to the controller before moving the tray out of the way. Do not leave lit cigarettes or other heat sources on the tray as this could cause the tray to deform and mark.

Ensure that all extremities and clothing swing-away arm is out and you may not get between certain obstacles.

Do not hang any items on or over the parallel swing-away remote assembly as this could damage the swing-away mechanism.
When transferring to and from the wheelchair do not use the remote as a means of support.

Keep fingers, clothing, etc. clear of the swing-away mechanism at all times.

Ensure the power is switched off while adjusting the parallel swing-away arm.
Only operate the wheelchair at low manoeuvring speed when the parallel swing-away is in use.

Fig. 35

Batteries - single box

The single battery box is mounted below the wheelchair seat (Fig. 36)
To remove the battery box disconnect the power plug from the control panel on the front of the box lid. The lid contains the power socket, a three pin charging socket and two cutout switches of 15 and 70 amp.
To remove the battery box push the basket forwards with the rear facing handle, sufficiently to release the retaining hooks. Lift the basket (to clear the retaining hooks) and pull it out so that the battery box can be removed.
Disconnect the power plug from the control box panel and remove the battery box (Fig. 37).

To remove the basket completely follow the above steps, but slide the basket over the retaining bars allowing the basket side channels to clear the end of the support rails. Lift and withdraw the basket.

To replace the battery box and/ or basket reverse the above procedure.

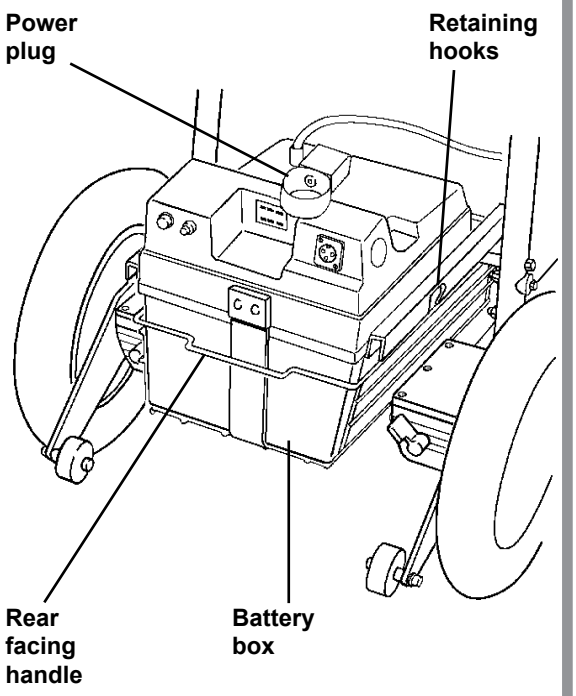


Fig. 36

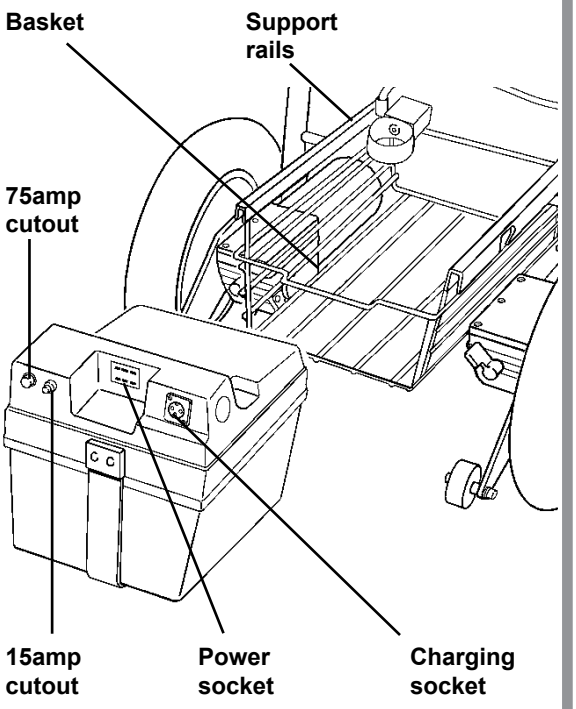


Fig. 37

Batteries - split boxes

The batteries are contained within two battery boxes, which are housed in a removable wire basket sited below the wheelchair seat (Fig. 38). The battery boxes consist of a controlbox with a control panel within a tall lid containing the power socket, a three pin charging socket and two cutout switches of 15 and 70 amp. The boxes are connected by a tandem connector wired from each box lid. To remove the boxes lift the basket with the rear facing handle so releasing the basket from retaining the hooks, this enables the basket to slide out sufficiently to allow the removal of the battery boxes. Disconnect the power plug from the control box and the tandem connectors. The battery boxes can now be lifted out (Fig. 39). To remove the basket completely slide it over the retaining bars and allow the basket side channels to clear the end of the support rails. Lift and withdraw basket.

Return the battery boxes to the basket ensuring that the control battery box panel faces backward, connect the power plug and tandem connectors to ready your chair for use.

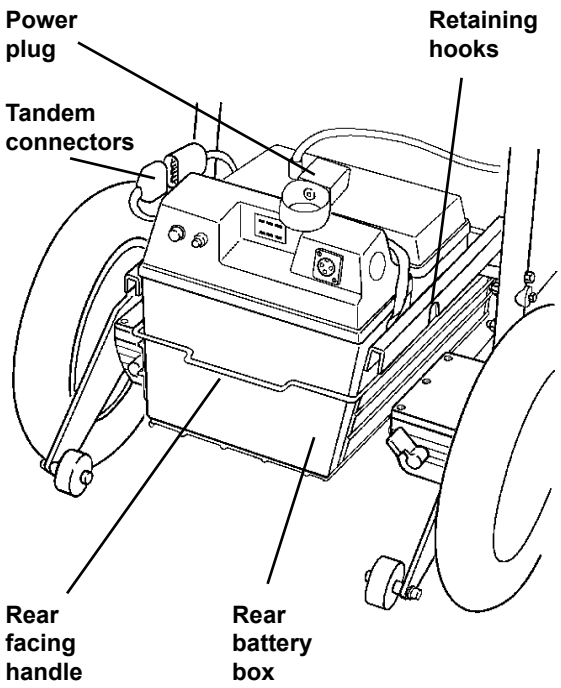


Fig. 38

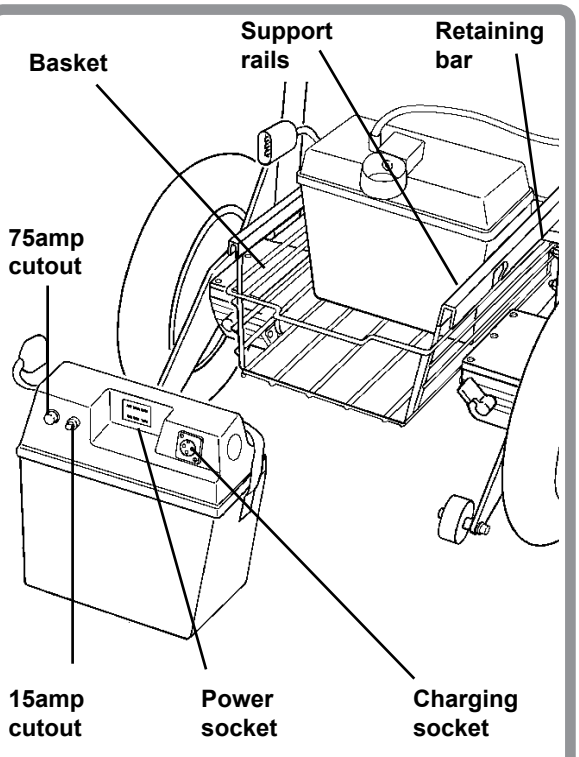


Fig. 39

Batteries and charging

General information

Batteries are the power source for almost all of the modern mobility products available today. The design of batteries used in mobility products is significantly different to the batteries used to start a car for example. Car batteries are designed to release a large amount of power over a short period of time, whilst mobility batteries (commonly called deep cycle batteries) release their power evenly, over a long period of time. Therefore, due to the lower production volumes and increased technological requirements, mobility batteries are typically more expensive.

Commonly two 12 volt batteries are used together in a mobility product, giving a total voltage of 24 volts.

The size of the battery, (e.g. its available power) is expressed in amps per hour e.g. 30amp/hr. The higher the number, the bigger the battery size, weight and, potentially, the greater the distance you can travel.

Sunrise Medical only fit as standard maintenance free batteries into this type of wheelchair.

Maintenance free batteries

This type of battery uses a method of carrying the electrolyte commonly referred to as ‘gel’, that is held within the battery case. As the name implies, no maintenance is required other than regular charging. You can safely transport this type of battery without fear of acid spilling.

Furthermore, they are approved for transportation on aircraft.

Battery care

Below is set out a battery care plan for maintenance free batteries. This has been agreed between Sunrise Medical and the battery manufacturers, to enable you to get the best out of your batteries. If a different care plan is followed, this may result in lower than expected performance from your mobility vehicle.

Batteries and charging

Maintenance free battery care plan

1 Only use an approved Sunrise Medical charger compatible with the vehicle to be charged.
2 Charge your batteries every night, regardless of the amount of use your mobility device has had during the day.
3 Do not interrupt the charging cycle.
4 If your mobility device is not required for use, it should remain connected to the charger until required. This will not damage your batteries, so long as the mains socket/plug is left switched on. Turning the mains socket/plug off, but leaving the mains cable plugged in will eventually deplete your battery charge.
5 If you leave your vehicle for an extended period (more than 5 days) disconnect the main battery lead.
6 Failure to allow for recharge will damage the batteries and can lead to shortened distances and premature failure.
7 Do not top up the charge of your batteries during the day. Wait until the evening for a full overnight charge.
8 As a general rule, maintenance free batteries take longer to fully charge than lead acid batteries.
9 The battery terminals need to be checked regularly for signs of corrosion. If any corrosion is apparent, then clean the terminals completely (a wire brush is ideal) and re-grease the terminal using Vaseline petroleum jelly, not ordinary grease. Ensure that the terminal nut and bolt, cable clip and exposed cable are completely covered with jelly.
10 Following all the points above should result in a healthier battery, greater range for the vehicle user and a longer life for your batteries.

Do not expose any part of the battery to direct heat (i.e. naked flame, gas fire).

When charging always place on a hard surface in a room with good ventilation.

You should not charge your batteries in outdoor conditions

Batteries and charging

General

The external charger (Fig. 40) has been designed to charge two 12 volt Sonnenschien Dryfit Gel type batteries.

Safety features

The chargers have features which prevent hazards or accidents occurring as a result of connecting batteries the wrong way round, overheating caused by fault conditions, or attempting to charge wrong voltage batteries.
The majority of charger sizes are electrically double insulated and no earth connection is required. Some larger sizes may be electrically earthed and this will be clearly stated on the label.

The 3 pin UK mains input plug contains a replaceable fuse. The rating of this fuse is shown on the charger label. Always replace with the same type and size of fuse as specified. Fitting of different fuses can result in damage to the charger or failure of the charger to operate properly.
If your charger has been specified for use in Continental Europe it will contain a European two pin plug which does not have a fuse. In this case the fuse is located in the fascia panel of the charger.

24V 5A Off-board Charger

Fig. 40

Batteries and charging

24V 8A charger indicator lights

The charger has 3 light indicators, each clearly marked on the label to show their function (Fig. 42).

Yellow - charging

This will illuminate a few seconds after connection, indicating that charging of the batteries is taking place.

Green - charge complete

This will illuminate when the battery is fully charged. This can be anywhere from 8.5 hours to 14.5 hours after commencement of charging, depending on how discharged the batteries were. The ‘mains’ light will remain on. Please note that after the charge complete light has illuminated, the charger will continue to charge the batteries. However the charging and ‘bulk charge’ complete light will not be illuminated at this point. Following a further period of time the charger will switch to a ‘float voltage’ setting. It can therefore be left on indefinitely.

Red - fault light

Battery voltage too low, try again after 30 mins.

Fault finding guide for 24V 8A charger

DANGER! DO NOT REMOVE THE UNIT COVER, SPECIALIST SKILLS AND EQUIPMENT ARE NECESSARY FOR REPAIR.

Fault: The yellow “charging” lamp is not illuminated

Check that the 13A mains plug is properly mated with the mains outlet socket and that the mains supply is switched on. If the lamp remains off consult Sunrise Medical or your local Sunrise Medical dealer.

Fault: The charger is switched on but the red “failure” lamp is illuminated

Check that the charger connections are correct and that the plugs are fully mated in the sockets. If the lamp remains illuminated it is possible there is a fault in the battery, consult Sunrise Medical or your local Sunrise Medical dealer.

Fault: The red “failure” lamp blinks

The battery voltage is too low, try again after approximately 30 minutes. If the lamp continues to blink consult Sunrise Medical or your local Sunrise Medical dealer.

Connecting the charger and charging

1 The wheelchair can be charged by connecting the battery charger to the charging socket in the split battery box lid **A** (Fig. 41) or **B** for the single battery box (Fig. 41).
2 Connect the charger to the mains supply by means of the mains plug switch on. The green “On” light will illuminate (Fig. 42).
3 The amber charging light will start to flash as charging commences. When the amber light is steady, charging is complete. If not needed for immediate use the charger can remain connected & switched on for extended periods, (Fig. 42).
4 Do not leave the charger connected to the battery with the mains disconnected or switched off. This could result in damage to your battery being caused by deep discharge over a period of time.
5 Always switch off at the mains before disconnecting the batteries.

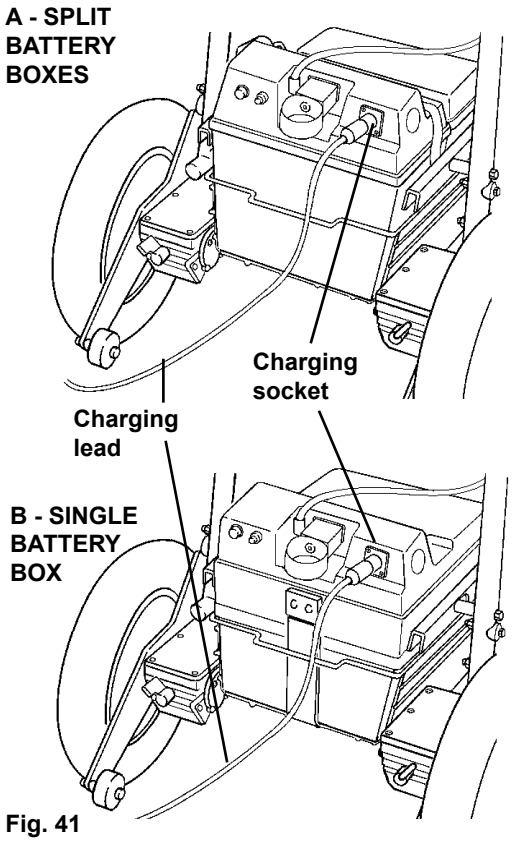


Fig. 41

Fig. 42

Batteries and charging

Safety and caution notes

1 The charger is designed for indoor use. Do not use outdoors or expose to rain, snow, spray or moisture.
2 Use only with Sonnenschein dryfit Gel type batteries of the A200, A500 or A500C groups when employed in cyclic mode.
3 The charger may be used with other brands of Gel type batteries, subject to written confirmation from the Technical Department of Sunrise Medical.
4 Do not smoke, or create sparks or flames in the vicinity of the batteries.
5 Avoid standing the charger on carpets or rugs during use and do not cover the ventilation slots of the charger or allow objects to rest on the case.
6 Do not attempt to recharge other types of batteries such as car batteries, non-rechargeable batteries, AGM sealed batteries, wet electrolyte batteries or batteries of the wrong voltage.
7 Repairs should only be carried out by Sunrise Medical.
8 The charger is designed for mains input voltages of 220V AC to 240V AC, for chargers to operate with 110V AC (in countries such as USA or North America), a different charger will be needed, please consult local Sunrise Medical Dealer.
9 Use of an attachment, not recommended or sold by Sunrise Medical, may result in a risk of fire, electric shock or injury to persons. To reduce the risk of damage to electric plug and cord, pull by the plug rather than the cord when disconnecting the charger. Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If any extension cord must be used, make sure the pins on the plug of the extension cord are the same number, size and shape as those of the plug on the charger; and that the extension cord is properly wired and in good electrical condition.

Batteries and charging

Important !

Do not rest a battery on top of the charger.
Do not stand the charger on a carpet or other soft surface. Always place it on a hard surface.
Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way, take it to a qualified technician.
Do not disassemble charger; only have it repaired by the manufacturers. Incorrect re-assembly may result in a risk of electric shock or fire. To reduce the risk of an electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
Turning off the controls will not reduce the risk.

Never place the charger directly above the battery being charged; gases from the battery will corrode and damage the charger.

Never Smoke or allow a spark or flame in the vicinity of battery or charger. Be extra cautious to reduce the risk of dropping a metal tool on to the battery. It could spark or short circuit the battery or other electrical parts, that may cause an explosion. Also take off all personal metal effects and dangling objects when working on the battery.

Never Charge a frozen battery. A fully charged battery will rarely freeze but the electrolyte of a discharged battery can freeze at 16° Fahrenheit (-9° centigrade), any battery that is suspected of being frozen should be thawed completely before charging.

Note: When buying replacement batteries always consult your Sunrise Medical service agent.

Note: Before using your vehicle for the very first time, please charge the batteries for a period of 24 hours.

Battery warranty

Battery warranties are subject to periods set by the manufacturers, however, most of these warranties are subject to a wear and tear clause, and if you genuinely wear out your batteries in 6 months, it will not be possible to obtain a replacement under warranty.

Batteries and charging

The range of your vehicle

Most manufacturers of mobility products state the range of their vehicles either in the sales literature or within the Owners Manual. The range stated sometimes differs from manufacturer to manufacturer even though the battery size is the same. Sunrise Medical measure the range of their vehicles in a consistent and uniform manner, but variances still occur due to motor efficiencies and overall product load weight.

The range figures are calculated to **I.S.O. Standard 7176. Part 4: Wheelchair Energy Consumption Theoretical Range**
This test is carried out in controlled conditions with new, fully charged batteries, on a level test surface and a user weight of 75kg. The range figures stated should be seen as a theoretical maximum and could be reduced if any single, or combination, of the following circumstances occur:

1 User weight heavier than 75kg.
2 Batteries whose age and condition are less than perfect.
3 The terrain is difficult e.g. very hilly, sloping, muddy ground, gravel, grass, snow and ice.
4 The vehicle climbs kerbs regularly.
5 The ambient temperature is very hot or very cold.
6 Incorrect tyre pressures in one or more tyres.
7 Lots of start/stop driving.
8 Also thick pile carpets within the home can affect range.

All this technical information may seem complicated and a little daunting, but please remember, that the battery sizes available on each Sunrise Medical product should give sufficient range to cope with the majority of customer's lifestyles.

Myths and legends

Over the years, battery technology has moved forward but, unfortunately, some of the advice given on battery care has not. This has resulted in a number of confused and at times contradictory instructions on the 'best' way to care for your batteries. This section will help to dispel some of these myths and legends.

1 Batteries can be charged immediately after use. You do not need to allow them to cool prior to charging.
2 Mobility batteries do not develop a memory from using a repetitive charge and discharge cycle. This only applies to nickel cadmium batteries commonly found in products such as camcorders.
3 Batteries when new do not require any special attention with regard to their charge and discharge cycle. Following the relevant 'care plan' is the best advice we can give.

User tips

Caution

Please show the utmost consideration for the other traffic on the road.

Remember that the last thing a car or lorry driver expects to see is a wheel chair backing off the kerb into the road. If in any doubt, do not risk crossing the road until you are certain that it is safe.

Always cross the road as quickly as possible; there may be other traffic.

Adverse conditions

Please be aware that when driving your wheelchair in adverse conditions, e.g. on wet grass, mud, ice, snow, or other slippery surfaces you may experience a reduction in the grip and traction of your wheelchair. We recommend you take extra precautions in these conditions, particularly on hills and slopes, your wheelchair could become unstable or skid causing possible injury. Extreme variances in temperature may trigger the self protect mechanism in the control system. If this occurs the control system will temporarily shut down to prevent damage to the electronics or the chair.

Ramps

When using a ramp, please ensure that is capable of taking the combined weight of the powerchair and yourself. If a ramp is being used to load a chair into a vehicle, please ensure the ramp is properly secured to the vehicle. Always approach the ramp head-on and exercise caution (Fig. 45).

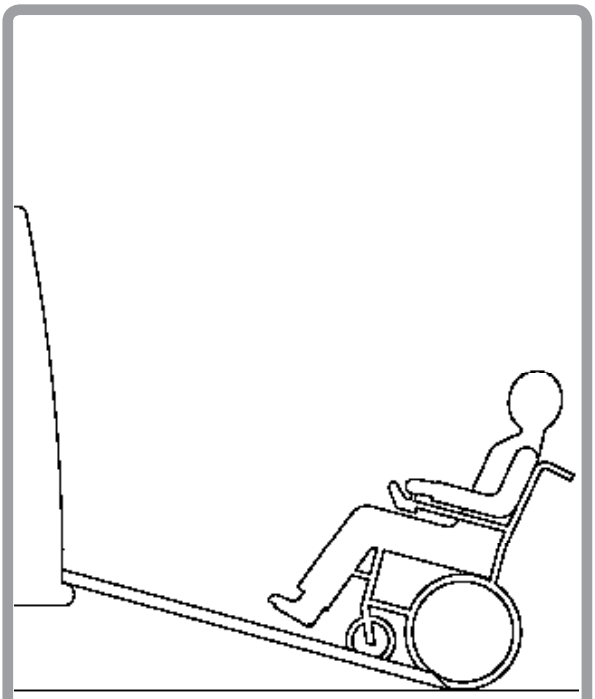


Fig. 43

Transfer to and from the chair

Sunrise Medical recommend that you consult your healthcare professional for assistance in developing your personal front or side transfer technique to best suit your needs, and avoid any personal injury (Fig. 44 and 45).

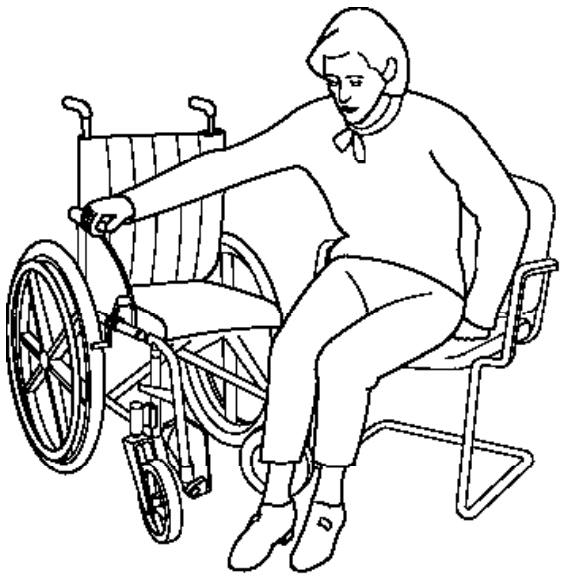


Fig. 44

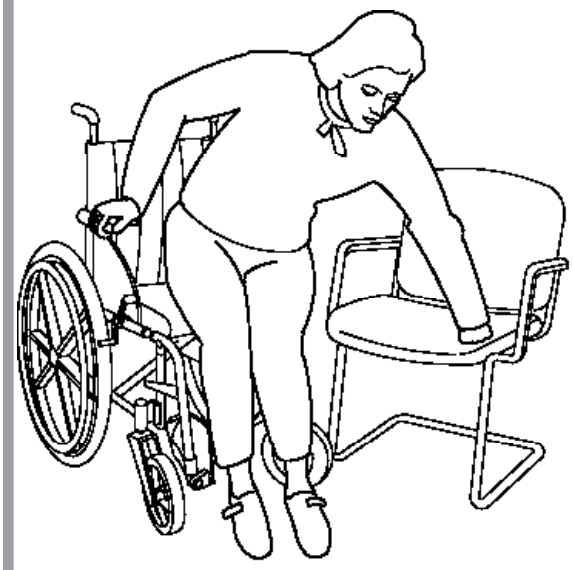


Fig. 45

Gradients: ascents

When going uphill, keep the chair moving. Keep the joystick pushed well forward and steer by moving it from side to side. If you have stopped on a hill, then you should start slowly, and if necessary lean forward to obviate the tendency for the front wheels to lift (Fig. 46).

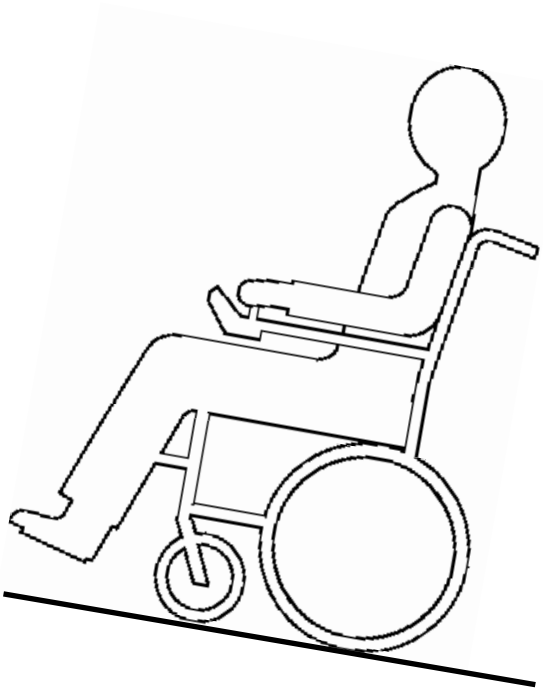


Fig.46

Gradients: descents

On descents, it is important not to let the wheelchair accelerate beyond its normal level of ground speed. In fact, it is safer to proceed slowly down steep descents and stop immediately if any anxiety arises regarding directional control. If the chair picks up speed, centre the control to slow it or to stop all forward movement, then restart slowly and do not allow the speed to increase. The solid state controller has the benefit of a logic system, that will help compensate when driving along a camber or up a hill. This is an added safety feature on your wheelchair. In addition of course, you may control the wheelchair speed by using the speed control (Fig. 47).

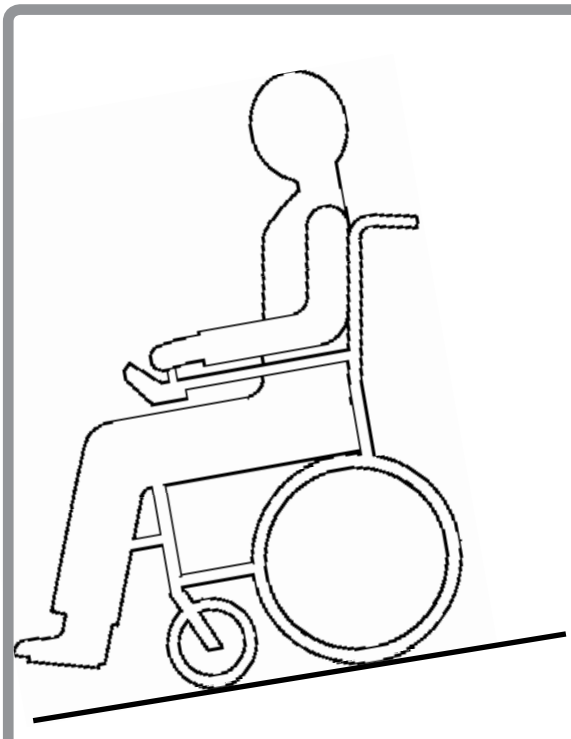


Fig. 47

Transportation

Clamp points

The F40 has been crash tested to BS 7176 Part 19. However, we do not recommend that you transport the F40 in a vehicle.

Should you still choose to transport the F40, please clamp the product using a 4 Point Webbing Restraint as per the diagram shown (Fig. 48).

Transportation in vehicles

Users should not sit in the wheelchair while riding in any and all means of transportation.

Only permanently installed car seats and seat belts will offer sufficient protection in hazardous situations. When vehicles are in motion, unoccupied wheelchairs should be secured using appropriate means.

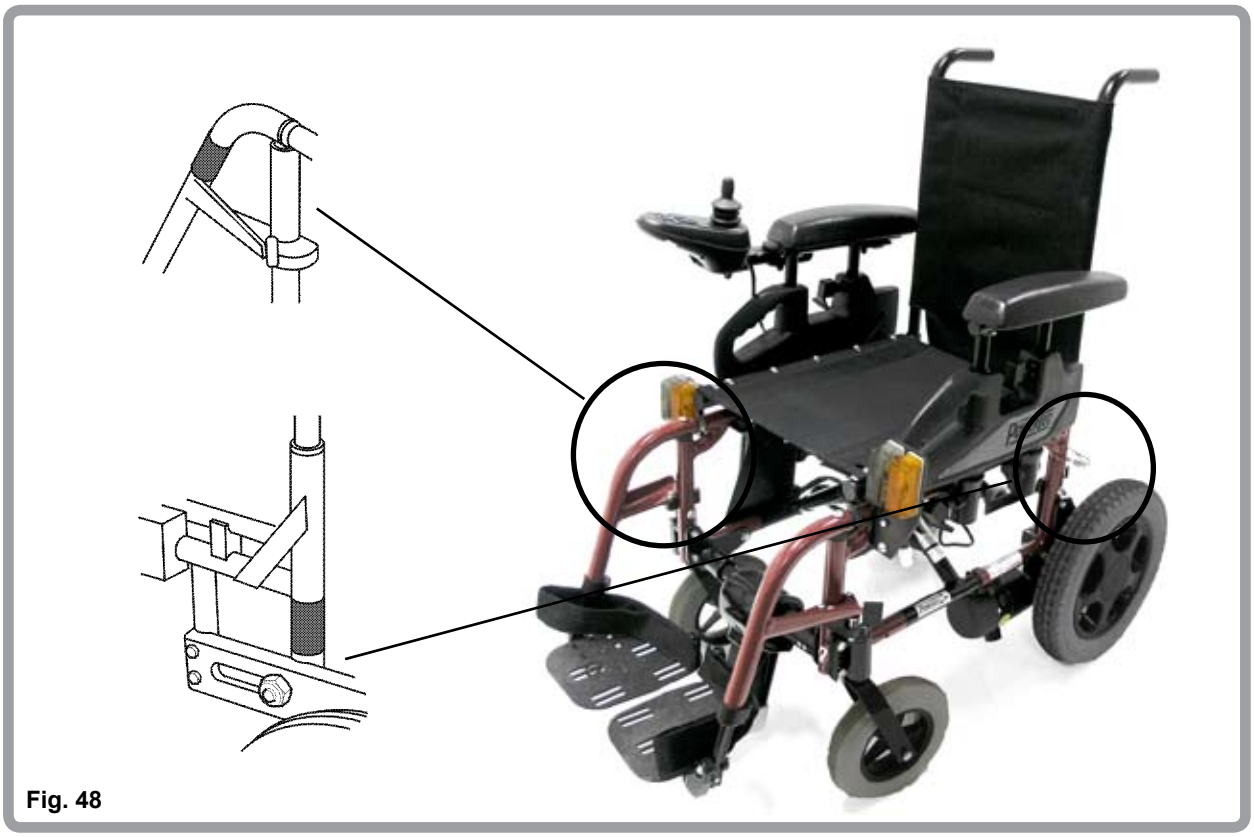


Fig. 48

Maintenance

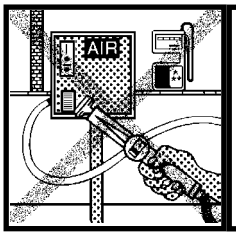
Cleaning

The wheelchair should be wiped over once per week with a slightly damp, not wet, cloth and any fluff or dust that has accumulated around the motors should be blown or dusted away.

Tyre pressures

If pneumatic tyres are fitted to your wheelchair it is important to regularly check the air pressure and for signs of wear.
The correct pressures are between the minimum of 137 kiloPascals (20 psi, 1.37bar) and the maximum 241 kiloPascals (35 psi,2.41bar) for rear wheels, and 102 kiloPascals (15psi, 1.02 bar).
The pressure will need to vary, depending on the weight of the user. IT IS IMPORTANT that front wheels are inflated to the same pressure as a pair, and likewise the rear. The inflator pump provides the safest method of inflating your wheelchair tyres and the pressure can be checked with a standard motor vehicle pressure gauge.

Do not inflate beyond the maximum tyre pressure.



PLEASE NOTE - NEVER INFLATE THE TYRES USING A GARAGE FORECOURT AIRLINE, ALWAYS USE THE PUMP PROVIDED.

Electrical connections

When inspecting electrical connections, pay attention to the battery connections, the connection of batteries to power loom and plug in sockets for the joystick, control box and lights and indicators.

Tyre wear

When inspecting the tyres for signs of wear, look for significant scuff marks, cuts and a diminished tyre tread. Tyres will need to be changed when the tread cannot be seen over the complete surface of the tyre.

Upholstery/seating

Tears, dents, wearing or slackening of upholstery particularly near to metal could result in poor posture or lower levels of comfort and pressure relief.

Authorised Sunrise Medical service agents

The annual full service must be performed by an approved Sunrise Medical Service Agent. For a list of approved service agents in your area please contact Sunrise Medical on this telephone number: 01384 44 66 66

Storage

When storing your powerchair for long periods of time (in excess of one week), first fully charge, and then disconnect the batteries, to minimise battery discharge.

Service history

This section is designed to assist you in keeping a record of any service and repairs to your Wheelchair. Should you decide to sell or exchange your vehicle in the future, this will prove most helpful to you. Your Service Agent will also benefit from a documented record and this manual should accompany the Wheelchair when service or repair work is carried out. The Service Agent will complete this section and return the manual to you.

Customer Name. _____

Address _____

_____

Postcode _____

Date chair purchased _____

Model _____

Colour _____

Serial No. _____

YEAR	1	2	3	4
Service dates				
Controller				
On/off switch				
Output plug				
Operation				
Dynamic braking				
Programmable settings				
Batteries				
Levels				
Connections				
Discharge test				
Wheels/tyres				
Wear				
Pressure				
Bearings				
Wheel nuts				
Motors				
Wiring				
Noise				
Connections				
Brake				
Brushes				
Chassis				
Condition				
Steering				

YEAR	1	2	3	4
Service dates				
Upholstery				
Seat				
Back				
Armpads				
Electrics				
Condition of loom				
Connections				
Lights (where fitted)				
Test run				
Forwards				
Reverse				
Emergency stop				
Left turn				
Right turn				
Up/down slope				
Over obstacles				
Parking brake (where fitted)				
List items repaired/adjusted				

Dealer Stamp

Date: Signed:

Dealer Stamp

Date: Signed:

Dealer Stamp

Date: Signed:

Dealer Stamp

Date: Signed:

Maintenance chart

F40 maintenance and routine inspection	DAILY	WEEKLY	MONTHLY	QUARTERLY	SIX MONTHLY	ANNUALLY
Charge batteries	●					
Check battery level indicator	●					
Ensure all removable parts are securely fastened	●					
Electrolyte level check (wet batteries only) SAFETY MUST BE OBSERVED!		●				
Ensure all electrical connections are made, and firm		●				
Wipe vehicle with a damp cloth		●				
Check tyre pressures		●				
Ensure lights and indicators are operational and clean		●				
Check tyres for wear			●			
Battery terminals inspection. Clean and protect with petroleum jelly. SAFETY MUST BE OBSERVED!				●		
Check condition of upholstery and seating					●	
Complete inspection, safety check and service should be made by an authorised Sunrise Medical supplier						●

To order spare parts.

PLEASE QUOTE THE FOLLOWING:

1. Model of chair
2. Serial number of chair
3. Left hand or right hand control
4. Part number and description and quantity of items required
5. State colour when ordering upholstery or frame parts.

Sunrise Medical

Your new wheelchair is manufactured in the West Midlands by Sunrise Medical. With over 30 years experience, we are one of the longest established mobility equipment manufacturers in the UK. All our Scootas, Wheelchairs, Powerchairs and Stairlifts undergo rigorous tests to ensure that they meet our requirements of comfort, safety and durability. Our success is based on the strong traditions of quality, value for money and genuinely caring for our customers.
We pride ourselves not only on designing and building the most innovative products but also on our commitment to offer an excellent standard of customer service both during and after sale.

In addition to your new wheelchair, Sunrise also manufacture oxygen concentrators, nebulizers and hoists. We have a vast range of aids to daily living which include the Merlin Bathing Range, bed accessories and walking sticks.

Should you require any information on our full range of products please call us on 01384 44 66 88. or write to us at:

Sunrise Medical Limited
High Street, Wollaston
West Midlands. DY8 4PS.
www.sunrisemedical.com

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